

CONSTRAINTS TO ACCELERATED ECONOMIC GROWTH IN UTTAR PRADESH

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The populous and sprawling state of Uttar Pradesh is well endowed with rich natural resources in the form of vast fertile lands, plentiful surface and ground water resources, flora and fauna of various kinds, forests as well as livestock resources. The state also has a large number of urban centres of various size and is well connected through rail and road network with other parts of the country. In spite of its rich natural resources and vast manpower the state of U.P. continues to be among the most backward states of the country in indicators of socio-economic development. The state has also lagged behind the country as a whole in the pace of economic growth throughout the planning period.

The present paper seeks to (a) provide a brief profile of economic growth in U.P. over the past two decades by sector and by region; (b) analyse the key determinants of growth performance; (c) identify the major institutional and policy constraints to growth in various sectors; and (d) suggest measures to overcome these constraints.

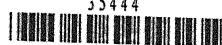
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GROWTH RATES OF SDP

The growth performance of the U.P. economy in the past five decades has been dismal. Growth rates of income in U.P. have lagged considerably behind the national average throughout the planning period except for two brief spells during the period 1974-79 and 1990-92 (Table 1). As a consequence the distance between the state and the national per capita income has been constantly widening throughout the planning period-(Table 2). In 1950-51 the state per capita income was nearly comparable to the national per capita income. Today U.P.'s per capita income is less than two-thirds of the national per capita income reflecting the fact that as compared to U.P. the rest of India has moved at a much higher pace. The relative gap has tended to widen at an accelerated pace during the nineties when national growth rate accelerated, while state growth rate suffered a decline.

In the first twenty-five years of planning the state economy moved at a snail's pace registering a growth rate of around 2 per cent per annum, which was barely above the population growth rate. Per capita income in the state virtually stagnated during this period. A definite turning point in the growth performance of U.P. economy was, however, discernible since around the mid-seventies (Singh, 1987a). During 1981-96 the state economy grew at the rate of 4.0 per cent per annum and per capita state income at the rate of 1.8 per cent per annum. Though these rates of growth are distinctly above the growth rates observed in the first three

Table 1 : Average Annual Growth Rate of Total and Per Capita Income in U.P. and India, 1951-96
(Per Cent)

Period	Growth Rate of Total Income		Growth Rate of Per Capita Income	
	U.P.	India	U.P.	India
1951-55	2.0	3.6	0.5	1.7
1956-61	1.9	4.0	0.3	1.9
1961-66	1.6	2.2	-0.2	0.0
1966-69	0.3	4.0	-1.5	1.8
1969-74	2.3	3.3	0.4	1.1
1974-79	5.7	5.3	3.3	2.9
1981-85	3.9	4.9	1.5	2.7
1985-90	5.7	5.8	3.3	3.6
1990-92	3.1	2.5	1.1	0.4
1992-96	2.4	6.2	0.6	4.3
1981-96	4.0	5.2	1.8	3.1

Note : Based on new series with 1980-81 as base.

Source : State Planning Commission, Government of U.P.(1997)
Draft Ninth Five Year Plan (1997-2002) and Annual
Plan, 1997-98, Vol.1, p.10, Lucknow.

decades of planning, they are still markedly below the national growth rate. Moreover, some slackening in the growth rate of U.P. economy is visible during the nineties.

Table 2 : Gap Between Per Capita State and National Income :✓
1950-51 to 1995-96

Year	Per Capita Income at Current Prices (Rs.)			
	U.P.	India	Absolute Gap	Relative Gap (%)
1950-51	267	259	8	3.0
1960-61	306	252	54	17.6
1970-71	486	633	147	21.6
1980-81	1278	1630	352	21.6
1985-86	1999	2730	731	26.8
1990-91	3590	4983	1393	28.0
1995-96	5983	9321	3338	35.8

Source : Plan Documents of U.P.

SECTORAL GROWTH

A look at the sectoral pattern of growth reveals that the stagnation observed in the state economy till the mid-seventies permeated all the three major sectors of the economy (Table 3). The performance of all the sectors improved markedly after that. However, the growth momentum witnessed in the state economy seems to have received a set back in the nineties. The sectoral pattern of growth suggests that the growth momentum witnessed during 1975-90 period was generated by the success of the green revolution in the state. The deceleration of the growth rates in

agriculture in the nineties has again led to overall deceleration in the state economy.

Table 3 : Sectoral Growth Rates in U.P., 1951-96

(Per Cent Per Annum)

Period	Primary Sector	Secondary Sector	Tertiary Sector	Total State Income
1951-56	1.8	1.6	3.0	2.0
1956-61	1.5	3.2	2.3	1.9
1961-66	-0.2	9.2	2.6	1.6
1966-69	0.6	-3.8	1.9	0.3
1969-74	0.9	6.7	2.9	2.3
1974-79	5.5	7.3	5.3	5.7
1981-85	2.3	6.8	5.0	3.9
1985-90	2.7	8.8	8.0	5.7
1990-92	5.4	1.2	1.6	3.1
1992-96	1.5	2.6	3.3	2.4
1980-81	1.8	5.5	3.1	2.7
1981-96	2.6	5.5	5.1	4.0

Source : Economics and Statistics Division, State Planning Institute, U.P. (1996), State Income Estimates, UP, 1980-81 to 1994-95, Lucknow; and Economics and Statistics Division, State Planning Institute, U.P. (1997), Draft Ninth Five Year Plan (1997-2002) and Annual Plan, 1997-98, Vol.1, Lucknow.

Growth rates of sectoral income for the period 1980-81 to 1995-96 have been computed by fitting the log linear

function ($\log y = a + bt$) to the index of sectoral NSDP at constant 1980-81 prices. The T and R^2 statistics for all sectors show a close fit (Table 4). The trend growth rates were 2.6 per cent per annum for the primary sector, 5.7 per cent for the secondary sector and 5.3 per cent for the tertiary sector. These growth rates are distinctly higher.

Table 4 : Log-Linear Growth Rate by Sectors in U.P. At Constant 1980-81 Prices - 1980-81 to 1995-96

	Constant	Coefficient	T Value	R^2
1. Agriculture and Animal Husbandry	4.9813	0.0274	21.2632	0.97
2. Forestry & Logging	4.6073	-0.0885	-11.3302	0.90
3. Fisheries	4.5868	0.0972	16.3703	0.95
4. Mining	4.6385	0.0856	6.6877	0.76
<u>Primary Sector</u>	4.5718	0.0264	14.5918	0.94
5. Manufacturing	4.6267	0.0711	13.1812	0.93
5.1 Registered Manufacturing	4.6852	0.0916	10.3264	0.88
5.2 Unregistered Manufacturing	4.5861	0.0458	22.3034	0.97
6. Construction	4.58225	0.0081	3.2195	0.43
7. Electricity, Gas, etc.	4.5187	0.0899	6.6115	0.76
<u>Secondary Sector</u>	4.6012	0.0571	12.7676	0.92
8. Transport, Warehousing and Construction	4.6288	0.0420	20.6535	0.97
9. Trade & Hotels	4.5543	0.0405	36.9815	0.99
10. Finance & Real Estate	4.5873	0.0642	12.8029	0.92
11. Public Administration	4.5484	0.0726	18.8047	0.96
12. Other Services	4.5077	0.0623	14.1912	0.94
<u>Tertiary Sector</u>	4.5569	0.0533	21.4829	0.97
Net SDP	4.5704	0.0414	21.5169	0.97
Per Capita SDP	4.5853	0.0198	11.5022	0.90

than the growth rates observed for the period 1960-61 to 1980-81 which amounted to 1.7 per cent, 4.9 per cent and 3.2 per cent for the primary, secondary and the tertiary sectors respectively.

Table 5 : Quadratic Function Estimates for Growth of NDP in U.P.

Period	Estimate of Function			R^2
	Constant	t	t^2	
<u>Net State Domestic Product</u>				
1960-61 to 1983-84	4.3463	+0.0053 (0.7939)	+0.07096 (0.6958)*	0.94
1980-81 to 1995-96	4.5219	+0.0575 (8.0456)*	-0.0010 (-2.3266)*	0.98
<u>Primary Sector NSDP</u>				
1960-61 to 1983-84	4.4033	-0.00006 (-0.6610)*	+0.0008 (2.0183)*	0.77
1980-81 to 1995-96	4.5874	+0.0212 (2.6919)*	+0.0003 (0.6811)	0.94
<u>Secondary Sector NSDP</u>				
1960-61 to 1983-84	4.1305	+0.0218 (2.2343)*	+0.0012 (3.3813)*	0.95
1980-81 to 1995-96	4.4340	+0.1129 (9.5706)*	-0.0033 (-4.8638)*	0.97
<u>Tertiary Sector NSDP</u>				
1960-61 to 1983-84	4.3153	+0.0137 (5.2499)	+0.0008 (8.1148)*	0.99
1980-81 to 1995-96	4.4917	+0.0750 (8.2776)	-0.0013 (-2.4670)	0.98

Note : Figures in parenthesis give t value.

Asterisk mark shows t values are significant at 5 per cent level or above.

Earlier studies have suggested that an acceleration in the growth of the state economy had taken place after 1974-75 (Singh, 1987; Dholakia, 1994). However, quadratic function estimates for the period 1980-81 and 1995-96 indicate a statistically significant deceleration in the growth rate of U.P. economy in recent years which is specially marked in the case of the secondary and tertiary sectors (Table 5). For the primary sector, however, the coefficient of T^2 is positive but statistically insignificant.

Quick estimates for 1996-97 indicate an increase of 7.3 per cent in NSDP over the previous year. This was primarily due to the unusually favourable weather which led to a jump of 10.9 per cent in agricultural output and should not be interpreted as implying a firm reversal of the deceleration phase observed in the nineties.

SECTORAL SHIFTS

The sectoral composition of income in U.P. did not show much change during the first two decades of planning. However, since 1970-71 we observe a sharp decline in the share of the primary sector in state income and a corresponding increase in the shares of the secondary and the tertiary sectors (Table 6). It needs to be added that the dominance of the primary sector continues to be much higher in the U.P. economy as compared to the national economy.

Table 6 : Shifts in the Sectoral Shares in State Income in UP
Since 1951

Period	Per Cent Share in State Income at Current Prices			
	Primary Sector	Secondary Sector	Tertiary Sector	Total State Income
1960-61	60.2	11.1	28.7	100.00
1965-66	61.2	12.5	26.3	100.00
1970-71	60.2	14.9	24.9	100.00
1975-76	54.0	16.3	29.7	100.00
1980-81	52.3	15.3	32.4	100.00
1985-86	45.2	18.5	36.3	100.00
1990-91	42.6	20.8	36.6	100.00
1995-96	42.0	20.3	37.7	100.00

Source : U.P. Government, Planning Department, Plan Documents

There has been a near stagnation in per capita income of the agricultural population between 1950-51 and 1980-81 (Table 7). Only in the eighties we observe a distinct improvement in per capita income of the agricultural population at a rate of 2.1 per cent per annum. However, for the entire period 1950-51 to 1990-91 per capita income of agricultural population increased at a slow rate of 0.58 per cent per annum. In the non-agricultural sector per capita income increased at a much higher rate of 2.30 per cent per annum. Consequently, the disparity ratio between the per capita non-

agricultural income and per capita agricultural income has almost doubled from 1.82 in 1950-51 to 3.59 in 1990-91 (Table 7).

Table 7 : Trends in Per Capita Income in Agricultural and Non-Agricultural Sectors in U.P., 1951-91

Year	Per Capita Income at Constant 1970-71 prices			Ratio Non- Agri. to Agri. Per Capita Income
	Total	Agricul-	Non-Agricul-	
		tural	tural	
1950-51	436	357	650	1.82
1960-61	453	376	644	1.71
1970-71	486	361	911	2.52
1980-81	519	365	958	2.62
1990-91	775	449	1614	3.59
Annual Rate of Growth 1951-91 (Per Cent)	1.45	0.58	2.30	

Source : Government of Uttar Pradesh, Planning Department (1991), Draft Eighth Five Year Plan (1992-97) and Annual Plan, 1992-93, Vol.1, Lucknow, p.136

REGIONAL DISPARITIES AND GROWTH

Marked disparities across regions and districts in the levels of socio-economic development and the growth rates continue to exist in the state. Western region of U.P. is comparatively more developed in terms of economic indicators. Central region falls in the intermediate category in terms of

economic development. The other three regions of the state, namely eastern region, hill region and Bundelkhand have been officially declared as economically backward. While Bundelkhand falling in the southern plateau and the hill region falling in the central Himalayas suffer from geographical handicaps, the eastern region is poverty stricken due to high population pressure in agriculture and low productivity. The problem of regional differentiation in the state has deep rooted historical, geographical, social and political factors (Singh, 1981).

The process of economic development albeit slow has been spatially fairly widespread though the deep rooted economic disparities have persisted and in some respect aggravated in spite of a favourable treatment of the backward regions under the state plans (Singh, 1981). We also find considerable intra-regional and inter-sectoral disparities at the district level in all the regions (Singh, 1997).

A particularly noticeable phenomenon has been the rapid spread of the green revolution across the irrigated plains of U.P. right from the relatively developed western districts to the backward eastern districts (Singh 1987, 1997). The relatively dry districts of the hill region and Bundelkhand, however, did not fare so well. In fact taking the quinquennial averages centred around 1969-70 and 1994-95 the growth rates of foodgrain output and yield have been faster in eastern region as compared to the western region (Table 8). However in case of commercial crops like oilseeds and

Table 8 : Region-wise Growth Rate of Output and Yield of Major Crops in U.P. (1968-71 to 1993-96)

(Per cent per annum)

Region	Wheat	Rice	Foodgrains	Oilseeds	Sugarcane
A. Output					
Western	4.15	5.38	3.15	5.46	3.43
Central	5.64	5.11	3.15	1.07	3.20
Eastern	6.51	4.80	3.61	3.91	0.82
Hill	1.72	2.85	1.82	3.20	2.31
Bundelkhand	2.97	-0.27	1.90	6.70	1.02
U.P.	4.80	4.80	3.15	4.06	2.85
B. Yield Per Ha.					
Western	3.96	2.79	3.05	2.15	1.55
Central	3.54	3.01	2.89	-	1.38
Eastern	3.97	2.87	3.16	2.13	0.73
Hill	2.24	2.17	2.10	2.96	1.55
Bundelkhand	0.10	2.29	1.72	3.28	1.58
U.P.	3.77	2.75	2.91	1.65	1.40

sugarcane western region has out performed other regions. Because of the irrigation constrain the hill and Bundelkhand region have not performed well in case of foodgrain output. But in case of oilseeds the two regions have registered fairly high growth rates.

Considerable variations in the levels of productivity and agricultural modernisation continue to persist (Table 9). Thus yields of wheat and rice were about 30 per cent higher in western region as compared to the eastern region during the triennium ending 1995-96. Availability of irrigation

Table 9 : Region-wise Indicators of Agricultural Productivity
in U.P. : Mid Nineties

Region	Average Yield Per Ha. (Qt1.) 1993-96			Percent of Gross Irrigated area to GCA 1995-96	Fertiliser Consumption Per Ha. of GCA (Kg.) 1993-94	No. of Tractors per 1000 of GCA
	Wheat	Rice	Sugar cane			
Western	28.4	22.5	642.8	83.0	111.1	19.4
Central	23.1	17.9	520.3	66.5	78.8	10.4
Eastern	22.2	17.6	510.2	57.0	89.6	10.4
Hill	18.1	19.8	612.9	35.9	75.2	9.7
Bundelkhand	18.0	8.7	410.0	38.5	24.6	13.4
U.P.	24.0	18.7	599.5	65.8	89.7	13.7

facilities is the key factor associated with the regional variations in agricultural development in the state (Singh, 1997, pp.350-351). The correlation coefficient at the district level between per cent irrigated area and productivity is 0.47 and between irrigated area and fertiliser use 0.65.

The regional pattern of industrial activity in the state is much more concentrated and has further skewed in recent years (Joshi, 1979; Papola, 1979). This is particularly so for the registered manufacturing sector. Nearly 60 per cent of the registered units and over half of the factory workers are located in the western region, while the share of the eastern region is only around one-fifth (Table 10). Ghaziabad in the vicinity of Delhi has now replaced Kanpur as the leading industrial centre of the state, the respective

share of the two districts in industrial work force being 12.1 and 10.9 per cent in 1988-89.

Table 10 : Region-wise Registered Factories and Workers in U.P. : 1960, 1975, 1988

Region	No. of Units			No. of Workers '000		
	1960	1975	1988	1960	1975	1988
Western	1301 (52.6)	2711 (60.0)	NA	105 (38.9)	200 (49.3)	333 (51.5)
Central	444 (18.0)	623 (13.8)	NA	53 (19.6)	73 (17.9)	144 (22.2)
Eastern	589 (23.8)	1008 (22.3)	NA	100 (37.2)	107 (26.2)	118 (18.2)
Hill	83 (3.4)	153 (3.4)	NA	7 (2.6)	13 (3.2)	37 (5.8)
Bundelkhand	55 (2.2)	51 (1.1)	NA	5 (1.8)	13 (3.1)	15 (2.3)
U.P.	2473 (100.0)	4517 (100.0)	NA	269 (100.0)	407 (100.0)	647 (100.0)

Source : Directorate of Industries, U.P.

The recent years have witnessed further regionalisation of the industrial economy of the state. Thus over half of the proposed investment of Rs.40,000 crores during 1990-95 has gone to a few western districts. Ghaziabad getting the lions share. Proximity to Delhi and a relatively developed infrastructure seem to be the major factors attracting industries to these districts.

The trends in per capita output from the commodity producing sectors indicate growing inter-regional disparities between 1980-81 and 1990-91 in the state (Table 11). Eastern U.P. is the poorest region of the state with a per capita value of commodity output below 30 per cent of the state

Table 11 : Region-wise Net Output Per Capita From Commodity Producing Sectors at 1980-81 Prices (Rs.)

Region	1980-81	1990-91	Per Cent Increase
A. All Sectors			
Western	987	1234	25.0
Central	721	854	18.4
Eastern	586	668	14.0
Bundelkhand	860	972	13.0
Hill	1184	1007	-15.0
U.P.	792	931	17.6
B. Agriculture and Allied Sectors			
Western	802	886	10.5
Central	582	650	11.7
Eastern	486	523	7.6
Bundelkhand	755	788	4.4
Hill	702	660	-6.0
U.P.	669	712	6.4
C. Manufacturing Sector			
Western	170	338	98.8
Central	133	195	46.6
Eastern	83	129	55.4
Bundelkhand	81	136	67.9
Hill	94	206	119.1
U.P.	123	219	78.0

Source : Economics and Statistics Division, State Planning Institute, U.P. District Level Development Indicators, 1993

average and around half of that in the western U.P. In terms of growth rates also western U.P. is clearly well above the other regions.

WORK FORCE GROWTH

The period 1971-91 is marked by an acceleration in population and workforce growth. Total workforce according to Census increased at a rate of 1.7 per cent per annum during 1971-81 and 2.5 per cent during 1981-91 (Table 12). This period also witnessed a modest shift in favour of the non-agricultural sector, with the share of agricultural workers declining from 77.3 per cent in 1971 to 74.5 per cent in 1981 and further to 72.2 per cent in 1991. This shift is mainly in favour of the tertiary sector. The share of the secondary sector, however, has remained nearly static, the gain in the non-household sector being nullified by the loss in the household industries.

Both acceleration in economic growth in the post green revolution period and the demographic pressure seem to be related to the changes in the workforce during 1971-91 discussed above. While the employment elasticity to income has remained fairly high (around 0.5) in U.P. in recent years, the agricultural and the informal sectors have absorbed most of the additions in the workforce. This is reflected in the high growth rate in the number of workers in agricultural and allied activities, construction, pretty

Table 12: Growth and Sectoral Structure of Workforce (Main Workers) in U.P. : 1971-91

Industrial Category	No. of Workers in Lakhs			Annual Growth Rate (%)	
	1971	1981	1991	1971-81	1981-91
1. Cultivators	157.0 (57.4)	189.6 (58.5)	220.3 (53.3)	1.9	1.5
2. Agricultural Labourers	54.5 (19.9)	51.8 (16.0)	78.3 (18.9)	-0.5	4.2
3. Plantation, Forestry, etc.	1.7 (0.6)	1.8 (0.5)	3.0 (0.7)	0.5	5.3
4. Mining & Quarrying	0.1 (-)	0.2 (0.1)	0.3 (0.1)	7.2	5.8
<i>Primary Sector</i>	213.3 (78.0)	243.4 (75.1)	301.9 (73.0)	1.3	2.2
5. Manufacturing & Repairs:					
(a) Household Industry	10.0 (3.7)	12.0 (3.7)	10.0 (2.4)	1.8	-1.6
(b) Non-Household Industry	9.9 (3.6)	17.2 (5.3)	22.1 (5.3)	5.7	2.5
6. Construction	1.7 (0.6)	3.3 (1.0)	5.1 (1.2)	7.1	4.5
<i>Secondary Sector</i>	21.6 (7.9)	32.5 (10.0)	37.1 (9.0)	4.2	1.3
7. Trade & Commerce	11.1 (4.1)	14.7 (4.5)	25.5 (6.2)	2.8	5.7
8. Transport, Storage & Communication	4.7 (1.7)	6.7 (2.0)	7.7 (1.9)	3.4	1.5
9. Other Services	22.6 (8.3)	26.8 (8.4)	41.3 (10.0)	1.7	4.4
<i>Tertiary Sector</i>	38.4 (14.0)	48.1 (14.9)	74.5 (18.0)	2.3	4.5
<i>Total Workers</i>	273.4 (100.0)	324.0 (100.0)	413.6 (100.0)	1.7	2.5

Note : Figures in brackets show percentage to total workforce

Source: Census of India Reports

trade and miscellaneous services. The income levels in these sectors are very low and there is considerable underemployment in these sectors. Thus, it may be surmised that the bulk of additional employment has been generated in low paid activities and the pace of modernization and structural change has been rather slow.

Table 13 : Distribution of Persons on the Basis of Usual Status (PS + SS) by Industry in Uttar Pradesh

Code	Industry	No. of Persons (in lakh)			Compound Annual Growth Rate	
		32nd round 1977- 78	43rd round 1987- 88	50th round 1993- 94	During 1978- 79 and 1987- 88	During 1987- 88 and 1993-94
0	Agriculture	262	322	370	2.08	2.35
1	Mining & Quarrying	-	-	1	-	-
2&3	Manufacturing	35	44	50	2.32	2.06
4	Electricity, Gas & Water supply	-	1	2	-	12.25
5	Construction	6	11	12	6.25	1.48
6	Wholesale & retail trades, restaurants & hotels	22	31	38	3.50	3.47
7	Transport, Storage & Communication	8	10	13	2.28	4.47
8&9	Services	26	42	49	4.92	2.60
Total		359	461	535	2.54	2.52

Source : NSS Reports

NSS data also reveal a fairly high growth rate of 2.5 per cent in total work force in U.P. since 1977-78 (Table 13). Agriculture absorbed 72.48 per cent of the total increase in workforce between 1977-78 and 1993-94. The period saw a very moderate shift in favour of the non-agricultural sector. Thus, the share of agricultural workers has come down from 72.98 per cent in 1977-78 to 69.16 per cent in 1993-94. The shift was mainly in favour of the services sector. In fact, the share of manufacturing sector in workforce has declined from 9.75 per cent to 9.35 per cent over the same period.

ORGANIZED SECTOR EMPLOYMENT

The organized sector accounts for merely 6 per cent of total workforce and 23 per cent of non-agricultural workforce. The absorptive capacity of the organized sector has remained low and has declined in the recent years. In the sixties and the seventies the organized sector employment increased fairly sharply rising from 10.93 lakhs in 1960-61 to 23.54 lakhs in 1980-81 mainly on account of the expansion in public sector employment (Table 14). In the last decade employment in the organized sector has practically stagnated due to slowing down of public sector employment. Private sector employment in the organised sector has failed to register any increase in U.P. since 1970-71.

Table 14 : Trends in Organized Sector Employment in Uttar Pradesh Since 1960

(Nos. in lakhs)

Year	Public Sector Employment	Private Sector Employment	Total Employment
1960-61	7.45	3.48	10.93
1965-66	12.25	4.88	17.13
1970-71	13.89	5.42	19.30
1975-76	15.67	5.48	21.15
1980-81	17.91	5.63	23.54
1985	20.25	5.47	25.72
1990	21.38	5.28	26.66
1994	21.34	5.22	26.56

Source : Directorate of Employment and Training in U.P.

The sectoral analysis of organised sector employment indicates that agriculture, manufacturing, construction and trade sectors recorded a decline in employment between 1988 and 1994 and the only significant increase took place in the financial and social services (Table 15).

Table 15 : Trends in Employment in Organised Sector in U.P.

Code No.	Industry	No. of Persons (in Lakh)			Compound Growth Rate per annum (Per Cent)	
		1978	1988	1994	1978- 1988	1988- 1994
0	Agriculture, Hunting, Forestry and Fishing	0.57	0.76	0.66	2.92	-2.40
1	Mining and Quarrying	0.05	0.08	0.09	4.82	1.96
2&3	Manufacturing	4.79	5.34	4.91	1.10	-1.44
4	Electricity, Gas and Water Supply	0.86	0.95	0.97	1.00	0.35
5	Construction	1.48	1.69	1.62	1.35	-0.68
6	Whole sale and Retail Traders, Restaurant and Hotels	0.25	0.32	0.27	2.50	-2.42
7	Transport, Storage & Communication	3.22	3.47	3.49	0.75	0.27
8&9	Services	11.54	13.90	14.55	1.88	0.76
	Total	22.76	26.51	26.57	1.54	0.03

Source : Directorate of Training and Employment, U.P.

The major reasons for the declining employment in the organised sector are the fiscal constraint on the state budget and continued sickness in the public and private enterprises particularly in the textile units. This decline in organised sector employment is a matter of serious concern as it implies that the major burden of providing employment falls on the unorganised sector already suffering from low productivity and over-crowding.

CASUALISATION OF WORKFORCE

Another important feature of the changes in the workforce witnessed in U.P., as in other parts of the country, is the growing casualisation of workforce due to the growing marginalisation of holdings and landlessness in rural areas. The proportion of agricultural labourers was 7.5 per cent according to 1951 census. It increased to 11.3 per cent in 1961 and further to 19.9 per cent in 1971 and has remained at that level since then. The NSS data also shows a decline in self employment and regular wage employment and a clear increase in the proportion of casual labourers in the last two decades (Table 15).

Table 15 : Per Cent Distribution of Workers by Type of Employment in U.P.

Type of Employment	1972-73 27th Round	1977-78 32nd Round	1987-88 43rd Round	1993-94 50th Round
Self Employment	76.78	73.26	71.80	71.59
Regular Wage/ Salary Earners	12.51	9.74	9.76	8.78
Casual Labourers	10.71	17.00	18.44	19.63
All Workers	100.00	100.00	100.00	100.00

Source : NSS Reports

RURAL NON-FARM EMPLOYMENT

The rural work force in U.P. is much less diversified and the process of diversification towards non-agricultural employment been much slower as compared to several other states (Chadha, 1997). The share of non-agricultural workers has increased moderately from 12.9 per cent in 1971 to 15.5 per cent in 1991 according to Census data (Table 16). According to NSS data the degree of diversification is somewhat more and the proportion of non-agricultural workers has risen from 18.1 per cent in 1972-73 to 23.7 per cent in 1993-94 (Table 17). Female workers constitute a very insignificant proportion of non-farm workers in rural U.P. (6.5 per cent).

Table 16 : Sector-wise Growth of Rural Workers in U. P. 1971-91

Year	Agricultural Workers	Non-Agricultural Workers	Total Workers
1971	20821 (87.1)	3085 (12.9)	23906 (100.0)
1981	23329 (86.3)	3697 (13.7)	27026 (100.0)
1991	28746 (84.5)	5282 (15.5)	34028 (100.0)
Per cent Increase			
1971-81	12.0	19.8	13.1
1981-91	23.2	42.9	25.9

Source : Census Reports

Note : Figures in parenthesis show percent to total workers

Table 17 : Rural Male Employment in U.P. (Nos. in '000)

Year	Agricultural Employment	Non-Agricultural Employment	Total Employment
1972-73	29229 (81.9)	6460 (18.1)	35689 (100.0)
1977-78	28106 (80.2)	6939 (19.8)	35045 (100.0)
1983	29405 (78.7)	7959 (21.3)	37364 (100.0)
1987-88	28124 (78.9)	7521 (21.1)	35645 (100.0)
1993-94	29473 (76.3)	9155 (23.7)	38628 (100.0)
Annual Growth Rate 1973-94	0.04	1.67	0.38 (100.0)

Source : NSS Reports

Note : Figures are for usually working persons by principal and subsidiary status.

According to census data the proportion of manufacturing sector workers in total non-farm rural workers has gone down from 39.4 per cent in 1981 to 29.7 per cent in 1991. In fact number of workers in rural non-household industry in U.P. has declined by nearly 20.0 per cent during this period. The tertiary sector workers have, however, increased by nearly 65 per cent during this period on account of the expansion of workers in the category of trade and commerce and other services including public administration. NSS data also reveal a similar picture during the period 1987-88 to 1993-94 (Chadha, 1997), pp.200-201). Thus, significant changes in

the composition of non-agricultural workforce has taken place in the state over the years. Many of the traditional household industries and services have declined while non-household industries, construction, transport as well as public and social services have emerged as important sources of rural employment (Singh, 1994).

There are considerable variations in the proportion of non-farm workers across districts and regions of the state (Papola, 1987; Singh, 1994). This proportion in 1981 was 29.3 per cent in hill region, 15.0 per cent in western region, 19.6 per cent in eastern region, 9.1 per cent in central region and 11.1 per cent in Bundelkhand. The pattern of growth of non-farm workers also varied across the districts. In general agricultural workers show a relatively high rate of growth in the western and central region, while the other three regions show a relatively faster growth of the non-agricultural workers indicating the operation of the resident sector hypothesis in the backward regions (Singh, 1994).

Multiple regression analysis across districts for 1981 brings out the positive role of agricultural development, mechanization of agriculture and availability of infrastructure particularly rural infrastructure in promoting the growth of the rural non-farm employment (Singh, 1994). Papola also finds that the performance of rural industrial sector in different states is broadly related with the levels

of agricultural productivity and more closely with the growth rate of agricultural output mainly through the general development of the area accompanying fast agricultural growth (Papola, 1987). Similarly Mathur and Chattopadhyay in their inter-state analysis also find that rural industrial growth is significantly related to overall rural development embracing infrastructure and agricultural technology (Mathur and Chattopadhyay, 1997, pp.227-229). Micro studies of Sharma reinforce these findings (Sharma, 1994).

The dynamics of change also seems to be different in different regions. It seems that in the poorer regions like eastern U.P. with relatively more adverse land-man ratio rural workers tend to spill over into rural non-agricultural activities in the low paying informal sector. Units located in developed regions generate higher incomes. Significant differences have been found to exist in the capital intensity, use of hired labour, productivity per worker and marketing pattern in the rural industries located in agriculturally prosperous western region and slow growing areas like eastern region (Papola, 1987). The units located in Muzaffarnagar in western region provided reasonable income and were carried out as the sole or main occupation in a much larger proportion than in Ballia in eastern region where quite a number of members of industrial households had to look for other sources of income as industrial units do not provide sufficient income.

AGRICULTURE-INDUSTRY LINKAGES

Agriculture continues to be the dominant sector of the state economy, much more so than at the national level. Performances of the agricultural sector, therefore, has strong impact on poverty and growth in the state specially on the industrial sector. Agriculture-industry linkages in the economy of U.P. has been examined in detail by Agarwal (Agarwal, 1996). Using the abridged input-output tables for U.P. for the years 1970-71 and 1977-78 prepared by the State Planning Institute, Agarwal has computed the forward and backward linkages for major sectors of the economy. Though the direct linkage effect of the agricultural sector is relatively low (0.5859), the total direct and indirect effect of the sector is substantial. The total forward linkage effect of agriculture and the allied sectors has been computed at 0.8309 and the total indirect effect at 1.2744 for 1977-78 (Table 18). The slight improvement in the linkage effects in 1977-78 over 1970-71 is indicative of the growing dependence of the agricultural sector on modern industrial inputs. The high values of coefficient of variation of columns and rows indicate the highly uneven nature of sectoral spread effects in the economy of U.P. The weak production relations in the state economy and its underdeveloped character is reflected in the fact that nearly 74 per cent of entry cells in the 64 x 64 input-output table of the state remained blank (Agarwal, 1996, p.138).

Table 18 : Direct and Indirect Linkage Analysis of U.P. Economy

Sectors	197-71				1977-78			
	Ui	Uj	Vi	Vj	Ui	Uj	Vi	Vj
1. Agriculture and Allied	0.7528	1.2169	1.2504	2.0164	0.8309	1.2744	1.2327	1.8849
2. Agro-based Manufacturing	1.2068	0.7247	2.0837	1.2484	1.2527	0.7415	2.1035	1.2241
3. Other Manufacturing	1.0616	1.2291	1.4250	1.7052	1.0711	1.1839	1.5218	1.7323
4. Power and Petroleum	0.9614	0.7903	1.7967	1.4477	0.9497	0.7780	1.8200	1.4694
5. Other Sectors	1.0174	0.9625	1.4355	1.4759	0.8953	1.0272	1.4117	1.6498

Note : Ui and Uj denote forward and backward linkages respectively.
 Vi and Vj denote the coefficient of variations of columns and rows respectively.

Source : Agarwal (1996)

Agarwal has also analysed the agriculture-industry linkages in a temporal framework. The elasticity of SDP with respect to agricultural SDP during the period 1960-85 was found to be much higher as compared to the manufacturing SDP (Agarwal, 1996, p.60). The elasticity of manufacturing SDP to lagged agricultural SDP was found to be 0.69 during 1960-61 to 1969-70 and 1.95 during 1970-71 to 1985-86 (Agarwal, 1996, p.61). The elasticity of industrial output to agricultural output was found to be statistically significant and high at the disaggregated level also except for the

cotton textiles (Agarwal, 1996, p.106). As would be expected the elasticity was found to be highest for the food manufacturing and beverages, tobacco, etc.

An important finding of Agarwal is that growth in agricultural output tended to turn the agricultural parity index in U.P. against the agricultural sector, which had a favourable impact on industrial growth (Agarwal 1996, pp.126-128). At the same time it was found that agricultural output is not influenced to any significant extent by the changes in the parity index lagged by one year. This would indicate the low importance of price factor in agricultural development vis-a-vis the non-price factors.

Our analysis for the period 1980-81 to 1995-96 confirms the continuation of the strong impact of agricultural growth on other sectors of the economy (Table 19). Thus, the elasticity of NSDP to lagged agricultural NSDP for the period comes to 1.44. The elasticity in case of registered manufacturing sector was as high as 3.01, while in case of non-registered manufacturing it was only 1.57. This may be so as agro-processing industries, which depend on agriculture-for raw material supply have a heavy weight in registered manufacturing sector in U.P. The non-registered manufacturing, on the other hand, consists of diverse type of activities which seem to be more demand than supply driven. The impact of agricultural growth on the tertiary sector is also fairly high though the different components of that sector are affected diversely (Table 19).

Table 19 : Elasticities of Sectoral NSDP to Lagged Agricultural NSDP in U.P. 1980-81 to 1995-96

Sector	Constant	Elasticity Coefficient	T Statistic	R ²
1. Registered Manufacturing	-8.9155	3.0067	8.0179	0.8318
2. Non-Registered Manufacturing	-2.5249	1.5673	14.1607	0.9391
3. Transport and Communication	-1.8584	1.4142	18.3583	0.9629
4. Banking and Insurance	-10.9500	3.4516	7.9980	0.8311
5. Finance and Real Estate	-5.4270	2.2068	10.3251	0.8913
6. Community and Personal Services	-6.1378	2.3432	14.2527	0.9399
7. Total Tertiary Sector	-3.9094	1.8632	15.8797	0.9510
10. Net SDP	-1.9557	1.4368	14.5141	0.9419

Note : Model : $\log y = A + b_1 \log A_{gt-1}$

where

y = Index of sectoral NSDP at constant prices

$\log A_{gt-1}$ = Index of Agricultural NSDP at constant prices in previous year

b_1 = Elasticity coefficient

All value are significant at 1 per cent level.

PRODUCTIVITY GROWTH

Labour productivity in U.P. has shown a modest improvement since the sixties. Productivity of male

agricultural workers in U.P. between 1962-1983 has increased at an annual compound growth rate of 1.78 per cent as compared to the growth rate of only 0.86 per cent at the all India level (Table 20). In the registered factory sector also labour productivity has been estimated to have increased at a linear rate of 0.43 during the period 1967-83, although there were regional variations as well (Kumar, 1988).

Table 20 : Male Worker Productivity in Crop Sector in U.P. at 1967-70 Prices

State	Male Worker Productivity (Rs.)			Annual Compound Growth Rate (%)	
	1962-65	1970-73	1980-83	1962-73	1970-83
U.P.	1031	1202	1417	1.94	1.66
India	1252	1322	1462	0.68	1.01
U.P. as % of India	82.3	90.9	96.9	285.3	164.4

Source : G.S. Bhalla and D.S. Tyagi (1989), Patterns in Indian Agricultural Development : A District Level Study, ISID, New Delhi, pp.40-41

The NSDP data also indicate an upward trend in labour productivity in all sectors of the economy. Thus, income per worker in the state increased at an annual rate of 1.20 per cent between 1971-81 and 2.19 between 1981-91. Productivity increases were higher in the nineties as compared to the eighties in all sectors of the state economy and in the non-

agricultural sector as compared to the agricultural sector (Table 21).

Table 21 : Per Worker Average Annual Income at 1980-81 Prices by Sectors in U.P.

Sector	Per Worker Income (Rs.)			Annual Compound Growth Rate (%)	
	1970-71	1980-81	1990-91	1971-81	1981-91
Primary Sector	2830	3012	3258	0.62	0.79
Secondary Sector	5854	6604	11170	1.20	5.39
Tertiary Sector	8305	9422	11056	1.28	1.61
All Sectors	3833	4325	5374	1.20	2.19

Note : Per worker income has been calculated by dividing sectoral NSDP by the number of workers given by the Census of India

Very few studies of total factor productivity growth are available for the state. According to one study total factor productivity increased at the annual compound rate of 0.42 per cent in the primary sector, 1.19 per cent in the secondary sector and 1.48 per cent in the tertiary sector of the state during the period 1960-61 and 1980-81 (Table 22). Total factor productivity growth contributed 28.4 per cent of output increase in the economy during the period. The contribution of productivity growth came to 23.7 per cent in primary sector, 20.6 per cent in secondary sector and 44.8 per cent in tertiary sector.

Table 22 : Compound Growth Rate of Total Factor Inputs and Total Factor Productivity in UP 1960-61 to 1980-81 by Sectors

Factor	Primary Sector	Secondary Sector	Tertiary Sector	Total SDP
Labour	1.32	1.65	1.05	1.33
Capital	3.09	9.46	3.72	4.45
Land	0.29	-	-	0.29
Total Factor Inputs	1.35	4.59	1.82	1.94
Total Factor Productivity	0.42	1.19	1.48	0.77
Output	1.77	5.78	3.30	2.71

Source : Kanchan Singh (1987), Sources of Economic Growth In Uttar Pradesh, Unpublished Ph.D. Thesis, Kanpur University, Kanpur

A recent study (Fan et.al, 1998) indicates that total factor productivity in agriculture in U.P. increased at the rate of 1.10 per cent per annum in the eighties. However, TFP declined in early nineties leading to a sharp decline in growth of agricultural output (Table 23). The registered factory sector also showed a rise in TFP in the state in all industrial groups excluding textile products during the period 1976-77 to 1987-88 (Table 24). In fact the performance of the industrial sector in U.P. during this period was better than that of the country as a whole. However, as noted earlier industrial growth sharply fell in the nineties in the state.

Table 23 : Production and Productivity Growth in Agriculture
in U.P. and India : 1970-94 (Per cent Per Annum)

Period	Production		Total Factor Productivity	
	U. P.	India	U. P.	India
1970-79	1.22	1.98	0.91	1.44
1980-89	3.01	3.82	1.10	1.99
1990-94	1.03	2.09	-0.42	-0.59
1970-94	1.93	2.11	0.70	0.69

Source : Fan et.al (1998)

Table 24 : Growth Rates in Value Added and Total Factor Productivity in Organized Industry in U.P. and India : 1976-77 to 1987-88 (Per Cent Per Annum)

Industry Group	Value Added		Total Factor Productivity	
	U.P.	India	U.P.	India
1. Food Products	7.9	6.1	1.7	1.4
2. Beverage and Tobacco	-2.4	4.9	0.9	0.8
3. Cotton Textiles	4.3	1.6	0.6	0.7
4. Wool, Silk & Synthetic Textiles	8.9	7.5	1.9	0.9
5. Textile Products	9.6	8.6	-1.3	1.4
6. Paper and Paper Products	7.9	3.8	1.1	0.6
7. Leather and Fur Products	9.8	6.0	1.4	0.7
8. Chemicals & Chemical Products	5.6	6.4	1.1	1.0
9. Non-Metallic Mineral Products	8.9	8.1	1.2	0.1
10. Basic Metal & Alloy Industries	4.6	2.5	0.8	0.2
11. Metal Products and Part	1.6	3.6	0.7	0.7
12. Machinery and Machine Tools	9.8	5.7	1.9	1.0
13. Electrical Machinery	9.3	8.8	1.5	1.4
14. Transport Equipment	-0.2	5.6	0.4	0.7
Total Organised Industry	7.7	6.0	1.5	1.0

Source : C.M. Jayadevan (1996), 'Inter-State Variations in Total Factor Productivity Growth Rates : A Case Study of Organized Industry in India', Man and Development, December.

INFRASTRUCTURE AND ECONOMIC DEVELOPMENT

Development literature has highlighted the role of economic infrastructure in promoting economic development in different regions and countries of the world. The crucial role of infrastructure is also confirmed by several studies using cross section district level studies for the state of U.P. Singh for instance found that in 1970-71 about 72 per cent of the inter-district differentials in per capita income across the 33 districts of western and eastern U.P. could be explained in terms of three factors alone, namely, (a) area per male worker representing resource base; (b) irrigation facilities; and (c) banking facilities representing infrastructure (Table 25).

Table 25 : Determinants of Per Capita District Income in U.P.
- 1970-71

Explanatory Variable	Regression Coefficient	T Statistic
Constant	88.9614	2.7472*
Area Per Male Worker	24.9458	2.3104*
Irrigation Facilities	2.1348	3.9083*
Banking Facilities	58.7927	2.5337*
$R^2 = 0.7241$	F Statistic = 25.3758	N = 33

* Significant at 5 per cent level

Source : Singh (1985)

Joshi has analysed relationship between infrastructure and economic development in U.P. at the regional and district level in great detail (Joshi, 1990). He finds a high correlation (around 0.85) between the composite indicator of economic and social infrastructure with the composite indicator of economic development. The relationship was found to be strong in case of the less developed districts as compared to the developed districts (Joshi, 1990, p.217). Irrigation and banking facilities were found statistically significantly related to agricultural productivity, while electricity, road density and banking facilities explained most of the variation in industrial development across districts (Joshi, 1990, pp.187-192).

Table 26 : Multiple Linear Regression of Determinants of Industrial Development at District Level in U.P., 1980-81

Variable	Regression Coefficient	T Statistic
Constant	-4.2768	.
X ₁ = Net output from commodity producing sectors	0.0026	4.33
X ₂ = Per cent of area under non-foodgrain crop	0.0456	1.73
X ₃ = Length of metalled roads per 100 sq. kms. of area	0.0177	0.84
X ₄ = Per capita consumption of electricity (KWH)	4.8928	3.44
X ₅ = Proportion of population living in towns with population above 50,000	9.0427	4.98
R ² = 0.7550	F Statistics = 30.20	N = 55

Source : Rakesh Kumar (1988)

Note : All variables except X₃ are significant at 5 per cent level or above

A study of Rakesh Kumar (Kumar, 1988) shows that industrial development in U.P. at the district level is basically explained in terms of per capita output, road transport, power and the proportion of people living in large towns (Table 26).

A more recent study of socio-economic development status at district level in U.P. in the early nineties based on principal component analysis again highlights the role of infrastructure, particularly rural infrastructure, in agricultural as well as industrial development (Singh, 1997). Social infrastructure, however, does not seem related to the development of the productive sectors revealing a dichotomous pattern of economic and social development in the state (Table 27).

Recent cross section studies across districts in India also highlight the role of rural infrastructure particularly irrigation, rural electrification, banks and primary schools in promoting agricultural development and reducing rural poverty (Binswanger et. al., 1993; Datt and Ravallion, 1997; and S. Fan et. al., 1998). These studies further demonstrate that agricultural output is determined in a complex interactive process where farmers, government and financial intermediaries respond to the same factors (Binswanger et. al., 1993). These studies have significant policy implications for rural development strategies.

Table 3 : Correlation Matrix Between Factor Scores of Different Sectors

	AGR	IND	INFG	INFR	INFO	EDU	MHD	HAB	SOC	INDEX
AGR	1.0000	0.4440	-0.1804	0.4711	0.1334	-0.4254	-0.3729	0.3631	-0.1444	0.6451
IND	0.4440	1.0000	0.1781	0.3165	0.2764	-0.2169	-0.4834	0.3960	-0.0819	0.6471
INFG	-0.1804	0.1781	1.0000	0.5159	0.8943	0.6772	0.2657	0.6925	0.8124	0.5702
INFR	0.4711	0.3165	0.5159	1.0000	0.8446	0.3207	-0.0066	0.6311	0.4996	0.8115
INFO	0.1334	0.2764	0.8943	0.8446	1.0000	0.5901	0.1630	0.7623	0.7685	0.7801
EDU	-0.4254	-0.2169	0.6772	0.3207	0.5901	1.0000	0.5959	0.2019	0.8198	0.2040
MHD	-0.3729	-0.4834	0.2657	-0.0066	0.1630	0.5959	1.0000	-0.1011	0.6462	-0.0758
HAB	0.3631	-0.3960	0.6925	0.6311	0.7623	0.2019	-0.1011	1.0000	0.6169	0.8011
SOC	-0.1444	-0.0819	0.8124	0.4996	0.7685	0.8198	0.6462	0.6169	1.0000	0.5152
INDEX	0.6451	0.6471	0.5702	0.8115	0.7801	0.2040	-0.0758	0.8011	0.5152	1.0000

AGR = Agriculture
 IND = Industry
 INFG = Infrastructure General
 INFR = Infrastructure Rural
 INFO = Infrastructure Overall
 EDU = Educational Facilities
 MHD = Medical and Health Facilities
 HAB = Habitat Status
 SOC = Social Development
 INDEX = Composite Index of Development

TRENDS IN PUBLIC INVESTMENT

The rather dismal performance of the U.P. economy over the planning period can be largely explained in terms of the low level of development effort made in the state (Singh 1986). The most significant indicator of the past development efforts is the level of plan expenditure. The per capita plan expenditure in the state has gone up from as little as

Table 28 : Per Capita Plan Expenditure in Uttar Pradesh ✓
(Rs.)

Plan Period		Per Capita Plan Expenditure		Per Capita Plan Assistance	
		U.P.	Punjab	All States	U.P.
First Plan	(1951-56)	25	175	38	13
Second Plan	(1956-61)	32	146	51	17
Third Plan	(1961-66)	72	212	92	46
Annual Plans	(1966-69)	53	90	61	30
Fourth Plan	(1969-74)	132	316	142	58
Fifth Plan	(1974-79)	329	691	361	144
Annual Plan	(1979-80)	94	199	113	218
Sixth Plan	(1980-85)	588	1126	718	375
Seventh Plan	(1985-90)	1077	2113	1270	N.A.
Annual Plans	(1990-92)	470	1014	565	N.A.
Eighth Plan	(1992-97)	1582	3239	2144	N.A.

Source : Statistical Diary, Uttar Pradesh, 1995

Rs.25 in the First Plan (1951-56) to Rs.329 in the Fifth Plan (1974-79) and further to Rs.1,582 in the Eighth Plan (1992-97). The levels of per capita plan expenditures in U.P. have not only been low absolutely but have fallen short of the average plan expenditure of all states and have been less than half of the plan expenditure in developed states like Punjab (Table 28). Being a poor state U.P.'s capacity to generate high levels of own resources for plan financing is limited. Consequently it is not able to attract a larger level of plan assistance from the Centre.

The flow of outside investment in the state has also been low and has failed to compensate the deficiency of internal investment. U.P.'s share in total investment in Central Government Undertakings was a paltry 4.8 per cent till 1980-81. The share improved to 8.6 per cent by 1992-93 but remained far lower than U.P.'s share of 16.6 per cent in the country's population. Similarly U.P.'s share in the cumulative loans distributed by all India financial institutions like IDBI, IFCI, LIC, ICICI, etc. stood at only 8.2 per cent in March 1993. U.P.'s share in total loans advanced by the commercial banks in the country was only 5.5 per cent in 1995.

Plan outlays have a favourable impact on economic growth of the state economy. The elasticity of SDP to plan expenditure is fairly high at 1.2 though if time as a variable is also introduced it declines to 0.34 (Table 29).

Table 29: Regression of Lagged Public Expenditure on NSDP at Constant Prices in U.P. : 1970-71 to 1995-96

Type of Expenditure	Constant	Regression Coefficient	R^2
	Public Exp.	Time	
Revenue Expenditure	8.0433	0.5052 (9.1779)	0.0323 (0.8912) 0.97
Capital Expenditure	9.8189	0.3430 (1.6054)	0.2427 (3.7038) 0.85
Plan Expenditure	13.2126	0.3449 (5.7504)	0.4568 (14.7792) 0.92
Non-Plan Expenditure	9.5826	0.3449 (5.7504)	0.2176 (4.7509) 0.97
Total Expenditure	6.3378	0.6266 (8.7615)	0.0229 (0.5890) 0.96

Model : $\log Y_t = A + b_1 \log X_{t-2} + b_2 \log T$

Where Y_t = NSDP in year T

X_{t-2} = Public Expenditure in year $T-2$

T = Time in years

During the period 1974-90 we notice a sharp rise in the ratio of plan expenditure as per cent of NSDP from around 4 per cent in the sixties to over 7 per cent in the seventies and eighties (Table 30). U.P. also attracted a larger share in central government investment during this period as a deliberate policy effort. Thus, the share of the state in cumulative investment in central government non-departmental undertakings jumped from a low level of 4.0 per cent in 1970 to 8.6 per cent in 1993. The larger investment by the state and central governments during this period is reflected in

the sharp acceleration in growth rate of U.P. economy registered between 1974-90.

Table 30 : Total Plan Expenditure in U.P. Under Five Year Plans

Period	Plan Expenditure (Rs. Crores)	Plan Expenditure as Per Cent of NSDP
1951-56	153	2.05
1956-61	233	2.66
1961-66	561	4.53
1966-69	455	3.86
1969-74	1166	4.69
1974-79	2909	7.01
1979-85	7356	7.62
1985-90	11949	7.44
1990-92	7772	7.28
1992-97	21683	4.73

Source : Compiled from Plan Documents

The scenario changed once again in the nineties when plan outlay/SDP ratio sharply fell to 4.7 per cent, which is reflected in the slow down of the state economy witnessed recently.

The failure of the state government to maintain the plan outlays at a high level can be traced to the deteriorating situation of the state finances since the early eighties. The mounting revenue expenditure of the state government on staff salaries, interest payment, subsidies, etc. have forced a squeeze in its capital expenditure. The capital expenditure

which was around one-third of total government expenditure in the early eighties has come down to below one-fifth in the nineties (Table 31). Similarly the ratio of plan expenditure to total expenditure has sharply come down from around two-fifths to one-fifth over this period. The composition of the plan expenditure itself has shifted in favour of current expenditure at the cost of capital expenditure.

Table 31: Share of Capital and Plan Expenditure in Total Public Expenditure in U.P. 1970-71 to 1995-96

Year	Revenue Exp.	Capital Exp.	Plan Exp.	Non-Plan Exp.	Total Exp.	(Per Cent)
1970-71	58.96	41.04	0.00	0.00	100.00	
1971-72	58.95	41.05	0.00	0.00	100.00	
1972-73	62.27	37.73	30.77	69.23	100.00	
1973-74	61.31	38.69	35.50	64.50	100.00	
1974-75	61.77	38.23	33.72	66.28	100.00	
1975-76	65.20	34.80	34.76	65.24	100.00	
1976-77	61.73	38.27	37.37	62.63	100.00	
1977-78	66.09	33.91	38.84	61.16	100.00	
1978-79	63.50	36.50	42.96	57.04	100.00	
1979-80	65.51	34.49	41.59	58.41	100.00	
1980-81	64.32	35.68	39.82	60.18	100.00	
1981-82	64.80	35.20	40.96	59.04	100.00	
1982-83	67.72	32.28	39.92	60.08	100.00	
1983-84	67.08	32.92	38.74	61.26	100.00	
1984-85	63.48	36.52	41.05	58.95	100.00	
1985-86	69.45	30.55	38.88	61.12	100.00	
1986-87	69.82	30.18	40.10	59.90	100.00	
1987-88	73.61	26.39	36.53	63.47	100.00	
1988-89	77.45	22.55	35.71	64.29	100.00	
1989-90	79.43	20.57	30.02	69.98	100.00	
1990-91	77.93	22.07	31.03	68.97	100.00	
1991-92	78.51	21.49	30.00	70.00	100.00	
1992-93	78.65	21.35	27.16	72.84	100.00	
1993-94	81.60	18.40	23.88	76.12	100.00	
1994-95	81.40	18.60	25.40	74.60	100.00	
1995-96	84.46	15.54	20.50	79.50	100.00	

Source : Budget Documents, U.P. Government

Significantly the ratio of plan expenditure as well as that of capital expenditure to SDP, which had maintained an upward trend in the seventies, has sharply declined since the early eighties and is below the level which obtained in the early seventies (Table 32). What is even more worrying is the fact that in real terms plan expenditure as well as capital expenditure of the state government has actually

Table 32 : Public Expenditure As Per Cent of Net State Domestic Product in U.P.: 1970-71 to 1995-96

Year	Revenue Exp.	Capital Exp.	Plan Exp.	Non-Plan Exp.	Total Exp.
1970-71	7.97	5.55	NA	NA	13.53
1971-72	9.83	6.85	NA	NA	16.67
1972-73	10.43	6.32	5.16	11.60	16.76
1973-74	10.23	6.46	5.92	10.76	16.69
1974-75	9.85	6.10	5.38	10.57	15.95
1975-76	11.56	6.17	6.16	11.57	17.73
1976-77	11.58	7.18	7.01	11.75	18.76
1977-78	11.23	5.76	6.60	10.39	17.00
1978-79	12.51	7.19	8.46	11.24	19.70
1979-80	13.95	7.34	8.85	12.44	21.29
1980-81	12.25	6.79	7.58	11.46	19.04
1981-82	12.68	6.89	8.01	11.55	19.56
1982-83	13.43	6.40	7.92	11.91	19.83
1983-84	14.14	6.94	8.16	12.91	21.07
1984-85	15.30	8.80	9.90	14.21	24.10
1985-86	15.01	6.60	6.40	13.21	21.61
1986-87	15.97	6.90	9.17	13.70	22.87
1987-88	16.67	5.97	8.27	14.37	22.64
1988-89	17.09	4.98	7.88	14.19	22.07
1989-90	18.37	4.76	6.94	16.19	23.13
1990-91	19.27	5.46	7.67	17.06	24.73
1991-92	18.18	4.98	6.95	16.21	23.16
1992-93	20.45	5.55	7.06	18.94	26.00
1993-94	19.04	4.30	5.57	17.76	23.34
1994-95	19.34	4.42	6.04	17.73	23.76
1995-96	19.47	3.58	4.72	18.32	23.05

Source: Budget Documents U.P.Government

declined since the early eighties, while non plan expenditure has maintained a high positive trend of over 6 per cent per annum (Table 33).

Table 33 : Public Expenditure at Constant 1980-81 Prices in U.P. (Rs. Lakhs)

Year	Revenue Exp.	Capital Exp.	Plan Exp.	Non-Plan Exp.	Total Exp.
1970-71	82780	57617	NA	NA	140397
1971-72	96853	67448	NA	NA	164302
1972-73	114588	69426	56628	127386	184014
1973-74	102637	64775	59425	107987	167412
1974-75	102169	63230	55778	109621	165400
1975-76	130629	69724	69643	130709	200353
1976-77	134557	83410	81454	136512	217967
1977-78	141744	72712	83304	131152	214456
1978-79	164960	94801	111593	148168	259762
1979-80	158176	83286	100419	141043	241463
1980-81	171649	95201	106258	160592	266850
1981-82	183292	99570	115857	167004	282862
1982-83	207342	98811	122226	183928	306154
1983-84	226324	111062	130709	206677	337386
1984-85	249412	143456	161277	231591	392868
1985-86	255326	112335	142948	224713	367662
1986-87	282412	122092	162209	242295	404504
1987-88	307875	110358	152769	265464	418233
1988-89	357529	104112	164833	296808	461641
1989-90	394538	102194	149100	347632	496732
1990-91	439555	124506	175021	389041	564062
1991-92	415968	113876	158967	370877	529844
1992-93	473535	128531	163528	438538	602066
1993-94	448653	101188	131313	418527	549841
1994-95	470824	107591	146945	431469	578415
1995-96	489021	90005	118681	460344	579026
Growth Rate					
1970-71 to 1982-83	7.32	4.24	8.01	3.71	6.18
1983-84 to 1995-96	6.11	-1.60	-0.74	6.35	4.24
1970-71 to 1995-96	7.07	1.73	2.89	5.07	5.60

Source: Derived from Budget Documents, U.P. Government by using SDP deflator

Table 34 : Index of Public Expenditure at Constant Prices of
1980-81 in U.P.

Year	Revenue Expend.	Capital Expend.	Plan Expend.	Non-Plan Expend.	Total Expend.
1975-76	100.00	100.00	100.00	100.00	100.00
1976-77	103.01	119.63	116.96	104.44	108.79
1977-78	108.51	104.29	119.61	100.34	107.04
1978-79	126.28	135.97	160.23	113.36	129.65
1979-80	121.09	119.45	144.19	107.91	120.52
1980-81	131.40	136.54	152.57	122.86	133.19
1981-82	140.32	142.81	166.36	127.77	141.18
1982-83	158.73	141.72	175.50	140.71	152.81
1983-84	173.26	159.29	187.68	158.12	168.40
1984-85	190.93	205.75	231.58	177.18	196.09
1985-86	195.46	161.11	205.26	171.92	183.51
1986-87	216.19	175.11	232.91	185.37	201.90
1987-88	235.69	158.28	219.36	203.10	208.75
1988-89	273.70	149.32	236.68	227.07	230.41
1989-90	302.03	146.57	214.09	265.96	247.93
1990-91	336.49	178.57	251.31	297.64	281.53
1991-92	318.43	163.32	228.26	283.74	264.46
1992-93	362.50	184.34	234.81	335.51	300.50
1993-94	343.46	145.13	188.55	320.20	274.44
1994-95	360.43	154.30	211.00	330.10	288.70
1995-96	374.36	129.09	170.41	352.19	289.00

Source: Budget Documents U.P. Government

TRENDS IN CAPITAL FORMATION

The few available studies indicate that rate of capital formation in U.P. has gone up sharply from around 10-12 per cent of NSDP in the early seventies to around 22-24 in the early nineties (Tables 35 & 36). But during the last three years of the Eighth Plan i.e. during 1994-97 the rate of capital formation sharply fell mainly on account of the lower

Table 35: Estimated Net Investment in U.P. Economy by Sectors
During Fourth and Fifth Plan Period

Period	State Govt.	Central Govt.	Corporate Sector	Private Sector	Total	As % of NSDP
1969-70	152	35	54	203	444	10.0
1970-71	196	37	61	226	520	12.2
1971-72	242	34	65	260	601	13.5
1972-73	308	80	69	293	748	13.6
1973-74	346	84	74	297	801	12.9
Total IVth Plan	1243 (39.9)	269 (8.6)	323 (10.4)	1279 (41.1)	3114 (100.0)	12.5
1974-75	334	100	67	551	1052	14.7
1975-76	425	68	69	435	997	14.2
1976-77	475	105	71	455	1106	13.6
1977-78	573	144	73	500	1290	13.6
1978-79	646	106	75	558	1385	14.2
Total Vth Plan	2453 (42.1)	523 (9.0)	355 (6.1)	2499 (42.9)	5830 (100.0)	14.0

Source : Perspective Planning Division, State Planning Institute, U.P.

Note : Figures in brackets show per cent to total investment

capital expenditure of the state government due to worsening fiscal situation. In fact, the share of state government in total capital formation has declined sharply from around 40 per cent in the seventies to around 24 per cent in the nineties. The share of the corporate sector on the other hand shows a three fold jump from 10 per cent in the Fourth

Table 36 : Estimated Capital Expenditure in U.P. Economy by Sectors During Eighth Plan (Rs. Crores)

Period	State Govt. ^a	Central Govt.	Corporate Sector ^b	Private Sector	Total	As % of NSDP
1992-93	5204	818	3957	5941	15920	22.5
1993-94	5364	1078	6358	6011	18817	23.7
1994-95	3435	1031	5955	6532	16953	18.8
1995-96	3054	1187	4575	7539	16355	16.2
1996-97	4029	1576	4956	8720	19281	16.4
Total VIIth Plan	21086 (24.1)	5690 (6.5)	25801 (29.5)	34743 (39.8)	87320 (100.0)	19.1

Source : U.P. Development Systems Corporation, Capital Formation In Uttar Pradesh During the Eighth Five Year Plan, Lucknow

Note : a : includes local bodies

b : includes public and private corporations

Figures in brackets denote percentages

Plan (1969-74) to 30 per cent in the Eighth Plan (1992-97). It may be added that the possibility of some double counting cannot be ruled out here due to the inclusion of the public sector corporations. The share of private and household sector in total investment has remained at around 40 per cent.

The annual growth rate of capital formation in real terms went up from 6.3 per cent during 1969-79 to 8.6 per cent during 1979-93, but registered a decline at the rate of 3.6 per cent during the years 1992-97.

These figures also imply a decline in factor productivity in the state economy in the nineties since a rate of investment of 19 per cent and rate of growth of 3 per cent during the Eighth Plan implies an ICOR as high as 6.3. There is reason to believe that the investment in the Eighth Plan is somewhat overestimated. However, one can draw a reasonable conclusion that the deceleration in the state economy observed in the recent years is due both to a decline in the rate of investment, particularly in the public sector, as well as declining factor productivity due to poor quality of public investment and leakages in the system.

FLOW OF INSTITUTIONAL CREDIT

The flow of institutional credit is an important indicator of the level of economic activity in an economy. The flow of commercial bank credit in U.P. has sharply decelerated in the nineties (Table 37). Thus, commercial bank credit which had expanded at an annual rate of around 19 per cent during the eighties, shows a growth of only 8.7 per cent in the nineties. The credit-deposit ratio too has come down sharply from 47 in 1990-91 to 34 in 1995-96. The slow down in bank credit does reflect a slowing down of economic activity in the state during this period. At the same time it reflects a change in the policy of the commercial banks who have become more cautious in their lending due to greater emphasis on profitability and reduction in non-performing

Table 37 : Scheduled Banks Credit and Deposit in U.P.

Year	Deposits (Rs. Crores)	Credit (Rs. Crores)	Credit-Deposit ratio
1980-81	3959	1908	48.19
1981-82	4647	2263	48.69
1982-83	5735	2764	48.20
1983-84	6644	3300	49.66
1984-85	7749	3811	49.18
1985-86	8630	4259	49.35
1986-87	11148	5029	45.12
1987-88	13293	5954	44.79
1988-89	15142	6992	46.18
1989-90	17904	8414	47.00
1990-91	20396	9347	45.83
1991-92	22539	10056	44.60
1992-93	25431	10773	42.36
1993-94	29619	11033	37.25
1994-95	35217	12331	35.02
1995-96	41450	14194	34.25
Annual Growth Rate (%)			
1980-85	18.3	18.9	
1985-90	20.0	18.5	
1990-96	15.2	8.7	

assets. To that extent reduced flow of commercial credit has adversely affected the availability of working capital to the industrialists particularly in the small scale sector (Singh, 1994).

The flow of financial assistance to U.P. by All India financial institutions like IDBI, IFCI, NABARD, etc. has remained low at around 7-8 per cent of their total lending reflecting the low absorptive capacity of the state. The relative share of U.P. has further gone down in the early nineties (Table 38).

Table 38 : Financial Assistance by All India Financial Institutions to U.P. Until 1995

Year	Sanctioned (Rs.Crores)	Disbursed (Rs.Crores)	Per Cent Share of U.P.	
			Sanctioned	Disbursed
1990-91	1288.0	907.6	7.98	8.76
1991-92	1219.4	1087.8	5.61	7.39
1992-93	1537.5	963.1	5.24	4.78
1993-94	2768.8	1172.8	7.08	4.81
1994-95	2556.0	2033.2	4.42	6.64
Cumulative Assistance Till March 1995	16752.1	11370.1	6.95	7.26

Source : Reserve Bank of India, Currency and Finance Reports

The flow of cooperative credit to the agricultural sector has, however, substantially improved in the nineties (Table 39). The improvement was confined to short term agricultural credit. The medium term agricultural credit, modest as it was, has further declined in recent years suggesting a slow down in investment activities (Singh, 1997, p.355). The recovery ratio of PAC loans shows a definite improvement in the recent years but it remains fairly low at about two-thirds of total demand.

Table 39 : Loans Advanced by Primary Agricultural Credit Societies in U.P. : 1980-81 to 1994-95

(Rs. Crores)

Year	Loans Advanced			Total Recovery	Recovery Percentage
	Short Term	Medium Term	Total		
1980-81	162.61	26.33	188.94	161.96	52.90
1981-82	179.28	41.99	221.27	178.68	51.50
1982-83	182.76	56.95	239.71	200.41	50.20
1983-84	201.89	48.39	250.28	221.80	49.70
1984-85	184.52	45.24	229.76	215.26	49.50
1985-86	206.66	47.82	254.48	239.84	48.60
1986-87	205.29	53.74	259.03	236.22	48.50
1987-88	224.54	100.21	324.75	267.47	51.07
1988-89	268.98	47.54	316.52	258.31	48.21
1989-90	264.43	33.48	297.91	206.07	71.10
1990-91	353.58	26.49	379.99	468.16	66.30
1991-92	608.21	28.94	637.15	541.35	66.00
1992-93	729.94	21.76	751.70	620.08	62.26
1993-94	737.72	26.77	764.49	631.47	57.44
1994-95	785.57	17.85	802.62	819.31	70.89
Rate of Growth Per Cent Per Annum					
1980-85	3.2	14.5	5.0		
1985-90	6.4	-6.8	4.0		
1990-95	22.1	-7.3	20.6		

Source : Registrar Cooperative Societies, U.P.

CONSTRAINTS IN DEVELOPMENT

The general economic backwardness of Uttar Pradesh and low growth rates of the state economy are a direct consequence of low levels of investment in the economy during the planning periods. The encouraging signs of acceleration

in investment and growth levels witnessed in the seventies and eighties could not be sustained in the nineties. Public investment has sharply declined as a ratio of SDP in the last decade reflecting the growing fiscal crisis in the state budget. The social milieu has not encouraged the growth of a vigorous entrepreneurial class in the state. The state has also not been able to generate a favourable climate to attract substantial investment from outside. A number of institutional, infrastructural and policy constraints have contributed to the relative economic stagnation of U.P. Some of the major constraints on accelerated development are briefly discussed here.

The major hurdle in the progress of agriculture and industry in the state has been the inadequacy and poor quality of the economic infrastructure. The CMIE index of relative development of infrastructure in U.P. has hovered around 110 as compared to the national average, way behind the level prevailing in Punjab (210), Haryana (153), Kerala (139), Tamil Nadu (138) and Gujarat (122), which are the rapidly growing states. In fact the relative gap in infrastructure between the developed states and U.P. has widened.*

The major infrastructural constraint is that of power. The installed capacity of power generation has remained static in the last few years with the result that energy deficit has increased from 17 per cent to 20 per cent. The

second major bottleneck is that of roads, particularly in the rural areas. The rural road density at 2662 km. per 1000 sq. km. in 1995 is among the lowest in Indian states and half of the all-India average (5196 km.), one-third of Punjab (8569) and only one-sixth of Tamil Nadu (16272). Nearly half of the over 1 lakh villages of U.P. have yet to be connected with all weather roads and around one-fourth villages remain to be electrified. The third major infrastructural constraint is that of financial infrastructure, which is much too inadequate in terms of physical accessibility and volume of credit required. The state similarly lags behind significantly in the field of telecommunications, etc.

Apart from the inadequacy of the economic infrastructure the quality of available infrastructure is far from satisfactory due to insufficient attention to maintenance and managerial deficiencies. This lowers the efficiency of the economy in general and raises the cost of production.

The second major development constraint in U.P. is that of the low levels of human resource development reflecting the substantial under investment in education and health services in the state (Dreze and Gazdar, 1996). In most of the indicators of social development, U.P. is at the bottom among Indian states (Table 40). Literacy levels continue to be abysmally low at 41.6 per cent in 1991 against the national average of 52.2 per cent. Female literacy is still at the shocking level of 25 per cent and even lower among deprived sections. The availability of health services is

relatively low and its access highly inequitous. This is reflected in the high rates of infant mortality and lowest-life expectancy in the state. Fertility rates are as high as 5.1, much above the national level and will take over a century to come down to the level of 2.1 already attained by Kerala and Tamil Nadu. The demographic situation, thus, presents an extremely worrisome picture.

Table 40 : Important Social and Demographic Indicators in U.P. and India : Early Nineties

Indicator	U.P.	India	Kerala
1. Birth Rate, 1996	34.0	27.4	17.8
2. Death Rate, 1996	10.0	8.9	6.2
3. Infant Mortality Rate, 1996	85	72	13
4. Couple Protection Rate, 1995	37.2	45.4	46.7
5. Total Fertility Rate, 1994	5.1	3.5	1.7
6. Life Expectancy : Females, 1991	55.1	59.7	74.7
7. Mean Age at Marriage : Females, 1994	19.5	19.4	22.3 22.3
8. Female literacy rate, 1991	26.0	39.4	86.9 86.9

Source : Planning Commission, Ninth Five Year Plan Draft (1997-2002), New Delhi

The prevailing low level of human development causes great deprivation to the large masses and constricts their capabilities to benefit from the limited opportunities

available to them on the one hand and constraints the rapid economic progress of the economy through low productivity levels on the other hand.

Thirdly, the state government has failed to generate a favourable development climate through appropriate policy measures to promote investment in the private sector in productive activities as well as infrastructure. Since 1991, considerable liberalisation of the economy has taken place and many of the regulatory measures constraining investment in domestic industry and agriculture have been removed largely on the initiative of Government of India. The process of liberalisation has brought about a change in the outlook of the upper echelons of the policy makers but the process has yet to make an impact at the cutting edge lower level functionaries (Singh, 1994). Private entrepreneurs are discouraged by the bureaucratic delays and hassles, which raise their transaction costs. The state policies have heavily depended upon subsidies and financial concessions to provide incentives to the agriculturalists and industrialists without adequately emphasizing economic viability of the schemes. The mounting subsidies have created a feeling of dependence, encouraged leakages and eroded into the productive investment by the government. The competitive concessions to industrialists have also eroded the potential resource base of the government, while proving inadequate to overcome other problems faced by the industrialists to attract investment.

Finally, over the years the public institutions providing development services have weakened and their functional efficiency has declined affecting the quality of the delivery mechanism. The institutional decay has extensively affected the functioning of the government departments, public corporations, public sector undertakings, rural financial institutions, extension services and research institutions. Political instability witnessed in the recent years has contributed to this deteriorating situation in its turn, affected the quality of governance and diverted attention from important developmental issues.

DEVELOPMENTAL PRIORITIES

A well thought out programme of public spending supported with a policy package to create a more investor friendly economic environment is needed in the state to stop the present economic slide and start a process of accelerated economic growth. This requires bold initiatives on the fiscal and policy fronts.

The fiscal imbalances which have emerged since the eighties need to be corrected by keeping the burgeoning revenue expenditure in check and gradually raising the share of the plan expenditures to at least the levels prevailing earlier. Given the limited possibilities of reduction in revenue expenditure, public investment can be raised only

through a bold programme of resource mobilisation by rationalising the tax structure, widening its base and reducing the present high levels of tax evasion specially in trade and property taxes. The tax-SDP ratio which has remained at a level of around 6 per cent in recent years has to be raised to 8-9 per cent over the Ninth Plan period.

The health of the state finances is also closely related to the question of public enterprise reform and cost recovery of public services in sectors like irrigation, power, education and health. A well thought out strategy of privatization and/or closure of terminally sick PSEs and sale of their assets can help in reducing fiscal deficit. Rational pricing of economic services provided by the state including power, transport and irrigation has to be followed as the present levels of subsidy have become unsustainable and are affecting the future growth of these critical inputs. Similarly cost recovery in the field of social services has remained unchanged at a nominal level for long affecting their quality and growth. Much of these subsidies are also mis-directed and are cornered by the rich. Only a gradual and sustained effort to raise the user charges to a reasonable level over a medium term can hope to succeed.

The programme of public expenditure should largely concentrate upon key areas of economic and social infrastructure constraining the accelerated growth of the economy. The real challenge of development policy in U.P. at

the present juncture is that of removing the social under-development of the state as early as possible by bringing about improvement in the educational and health status of the people, particularly the females and the vulnerable sections. Without substantially improving the human capabilities of the people no worthwhile social and economic progress is conceivable in U.P. Investment in social infrastructure and improvement in the quality of the services, therefore, are matters which deserve highest priority.

Public investment programme should sharply focuss on the removal of the infrastructural constraints. Heavy investment in power generation and distribution system and reform of the power sector to restore the financial viability of the UPSEB are the need of the hour. Similarly, improvement of rural infrastructure particularly roads and the rural credit system will pay rich dividends in raising agricultural output and diversifying the rural economy and will have a favourable impact on rural poverty situation.

To raise the effectiveness of public expenditure attention needs to be paid to the revitalization of the important public institutions including government departments, financial institutions, public utilities as well as research and extension agencies. The local level panchayati raj institutions should be empowered with adequate financial resources and powers to become effective institutions for people oriented planning.

Policy reforms are needed to create a favourable climate for private investment in agriculture and industry as well as infrastructure. Restrictions on agro-processing industries should be speedily removed and private sector should be encouraged to participate in the provision of various economic services in the rural areas. The various procedural irritants in starting industry need to be removed to the extent possible by reducing the red tape and adopting an entrepreneur friendly approach. A suitable policy package needs to be adopted to encourage the participation of the private sector in developing the much needed infrastructure in a big way.

To conclude, U.P. has a large development potential which remains to be fully tapped due to an unfavourable social and economic environment prevailing in the state. The experience of the seventies and the eighties has shown that the state is capable of attaining much higher growth rates than registered in the recent past. A well directed programme of public investment along with institutional and policy reforms to improve the quality of public services and generate a favourable climate for private investment can restart the state economy on a path of accelerated and sustained development.

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